

Technical Bulletin #22:

Iron – An Essential Mineral for Strong Bodies

Why does your body need iron?

- It strengthens the blood
- It builds muscles and brain cells
- It helps the body to work properly

If you don't get enough iron, what are the consequences?

- Lack of iron causes anemia, a syndrome that is caused by malnutrition.
- In Cambodia, iron deficiency anemia is a major health problem for some groups:
 - 55% of children aged from 6 months to 5 years old are anemic.
 - 44% of women aged 15 to 29 years old are anemic.
- Other problems associated with iron deficiency include:
 - Decreased immunity and reduced resistance to disease.
 - Decreased work performance

What foods are rich in iron?

Animal foods are the most important source because it is easier for your body to absorb iron

- Lean meats, particularly beef
- Liver, blood and internal organs of animals
- Fish and shellfish (shrimp, mussels)
- Eggs



Some plant foods are also good sources of iron

- Whole grain cereals such as maize
- Legumes such as beans, lentils, peas and groundnuts
- Dark green leafy vegetables such as morning glory, amaranth, kale, spinach and pumpkin leaves
- Watermelon



All images from: *FAO/NNP
Nutrition Handbook for the Family*

What are the needs for iron-rich foods of different people in your family?

Infants

At birth, infants have iron already stored in their bodies. This supply of iron is used up over the first 6 months of life.

- Breast milk is the best source of iron for infants under the age of 6 months. There is very little iron in breast milk but it is easily absorbed by the body.
- After 6 months, it is important to add iron-rich foods to the baby's diet. For instance, add small amounts of cooked red meat, fish or dark green leafy vegetables to *bobor*.



Women and older girls

Women and older girls need more iron-rich foods than men because their bodies lose iron during menstruation.

- Girls and women aged from 11 to 55 years need 18mg of iron per day. .
- Older women over 55 years of age need only 10mg per day.
- 85g cooked lean beef provides 5mg iron; 85g cooked chicken legs provides 3mg iron; 50g cooked beef liver provides 9mg iron; 250ml cooked dark green leafy vegetables provide 4mg iron; 1 large slice of watermelon provides 2mg iron.



Teenage boys

Teenage boys also need extra iron because they are growing rapidly at this age.

- Teenage boys aged from 11 to 18 years need 18mg of iron per day.
- Adult men over 19 years of age need only 10mg per day.
- 85g cooked lean beef provides 5mg iron; 85g cooked chicken legs provides 3mg iron; 50g cooked beef liver provides 9mg iron; 250ml cooked dark green leafy vegetables provide 4mg iron; 1 large slice of watermelon provides 2mg iron.





Pregnant and post-partum women

Pregnant women need much higher levels of iron in their diet – up to 27mg per day.

Good iron intake is also important for post-partum women to avoid health problems caused by iron deficiency anemia.

In Cambodia, health centers provide these women with iron/folic acid (IFA) tablets:

- During pregnancy, women are advised to take a program of 90 IFA tablets.
- Post-partum women are advised to take 1 IFA tablet for 6 weeks after delivery.
- The use of IFA tablets should always be supervised by your local health center.



How to prepare meat and vegetables to retain iron

- Stir-frying meats and vegetables is a healthy cooking method because foods are cooked without water, in a small amount of oil and only for a few minutes at a high heat. Stir-frying sears the outside of the meat or vegetables. This locks the nutrients inside.
- When stir-frying, meat and vegetables should be thinly sliced in order to cook faster.
- Cook with cast iron pots to add more iron to your meals.
- Harvest ripe vegetables on the day you want to eat them. Ripe vegetables offer the maximum amounts of key vitamins, minerals and other nutrients.
- Harvest vegetables in the early morning when it is still cool. This will minimize nutrient loss.
- Many vegetables lose nutrients rapidly. For example, dark green leafy vegetables that are a good source of iron can lose up to 80% of their nutrients within 2 days of being harvested.
- The best way to cook vegetables is to steam them. The hot steam locks in nutrients. Also, by avoiding contact with water, vitamins and minerals cannot leach out during cooking.
- If you cook vegetables in water, use only a small amount of boiling water and cook with the lid on for the shortest time possible.
- Do not throw away the water you use to cook vegetables. After cooking, the water is rich in nutrients. Use it to make sauces or add it to soups.

Vitamin C helps your body absorb iron

When you eat food rich in iron like fish, red meat, eggs or legumes, you also need to eat foods with Vitamin C to help your body absorb the iron. For example, if you serve a dark green leafy vegetable like morning glory or kale, you are serving a dish rich in Vitamin C. You can also use lemon or tamarind as an ingredient in your meal, or you can eat pineapple, mango or other fruits rich in Vitamin C after the meal.

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